

Framework for Regional Cyber Security Collaboration

Dr. Nathaniel Evans

Argonne National Laboratory

Dr. William Horsthemke

Argonne National Laboratory

Nathan Rinsema

Argonne National Laboratory

Agenda

- Introduction and Goals
- The current world
- The Regional Risk
- Collaborations and Information Sharing
- Conclusion



Goals

- Think about security in a way that gets everyone worrying and sharing information with people they trust.

Current State - Reporting a Crime

- Local Authorities
- Federal Authorities (CIC, ***, US Cert)

Common Attacks

- 0 day exploit (RDP flaw)
 - I found a hole in a system, so I am going to use it on your system
- Worked Else where
 - This attack worked at ABC, so it might also work here as they probably don't know it worked at ABC.
- Virus/Worm/Botnet
 - This code takes control your system and then finds others
- DDOS (Anonymous)
 - A bunch of us attack you, overwhelming you
- Social Engineering (Mitnik)
 - I pretend to be someone you trust in order to gain access



Now lets consider a focused attack

- *Draw map of city, show utilities, companies and connections.

What if we all worked together!?

- Don't I generally trust my neighbor more than a competitor?
- Don't I generally trust my neighbor more than the government?
- Don't I generally trust my neighbor more than a stranger?

How would this work?



Lets see how it applies to the Common Attacks

- 0 day exploit
 - I found a hole in a system, so I am going to use it on your system
 - Your in, but hopefully not in anywhere else
- Worked Else ware
 - This attack worked at ABC, so it might also work here as they probably don't know it worked at ABC.
 - Well ABC told me about it, so it won't work here
- Virus/Worm/Botnet
 - This code takes control your system and then finds others
 - Well I know about that signature, so I have scanned and fixed it
- DDOS
 - A bunch of us attack you, overwhelming you
 - Yep you have overwhelmed me. However I have a separate way out through company DEF.
- Social Engineering
 - I pretend to be someone you trust in order to gain access
 - I know the FedEx guy, and you are not him.

Information sharing possibilities

Communication

- Wiki's
- Email Lists
- Chat Servers
- Meetings

Tools

- Continuous Monitoring Tools
- Cyber Federated Model

Questions? Comments? Complaints?

Sources

